

REMARKS

Claims 1-26 are pending and under consideration. Claims 1-3, 5, 10, 17, 24 and 26 have been amended. Support for the amendments to claims can be found throughout the specification and at least in Paragraphs 17, 44 and 46 in the application as originally filed. Applicants submit that the claims have been amended in compliance with 37 C.F.R. § 1.121(c) and that no new matter has been introduced by the present Amendment.

Applicants have also amended the specification to correct typographical errors. Applicants respectfully submit that no new matter is included by these amendments to the specification.

Replacement Drawings

1. The Office Action states that the informal drawings are not sufficient quality to permit examination. Applicants have submitted herewith replacement drawing sheets in compliance with 37 C.F.R. § 1.121(d). Applicants respectfully request entry and examination of the replacement drawings.

Claim Objections

2. The Office Action states that claim 5 is objected to because “a subpackets” need to be modified. Applicants have amended claim 5 to recite formatting the synchronous parallel data units into respective subpackets during a first synchronization interval. Applicants respectfully submit that the amendment places claim 5 in a condition for allowance.

Claim Rejections Under 35 U.S.C. § 102

3. The Office Action states that claims 1-5 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication No. 2003/0072269 by Keenan et al (“Keenan”). For a claim to be anticipated under 35 U.S.C. § 102(b), the reference must disclose each and every limitation in the claim. Applicants respectfully disagree with the rejection and traverse the rejection.

With regards to claim 1 and 2, Applicants respectfully submit that Keenan fails to disclose, at least, asynchronously transmitting the packet across an asynchronous medium. With regards to claim 3, Applicants respectfully submit that Keenan fails to disclose, at least, asynchronously transmitting the subpackets through an asynchronous medium. Briefly, Keenan discloses Master Ethernet Packets where CBR channel information is encapsulated into fixed locations within the Master Ethernet Packet payload and user data packets are encapsulated into the payload not occupied by the fixed CBR channel locations. (See Keenan at Col. 19, lines 19-25). Keenan discloses that the Master Ethernet Packets are generated and transmitted at a constant rate to facilitate the transmission of Constant Bit Rate (CBR) Channel information over the LAN segment. (See Keenan at Col. 29, lines 22-26 and 58-64; Col. 24, lines 34-42; Col. 31, lines 42-48). Therefore, Applicants respectfully submit that Keenan fails to disclose, at least, asynchronously transmitting the packet across and/or through an asynchronous medium.

Claims 4-5 depend, directly or indirectly, from independent claim 3. For the same reasons as stated above, Applicants respectfully submit that claims 4-5 are also in condition for allowance.

4. The Office Action states that claims 17-19 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,466,572 issued to Ethridge ("Ethridge"). For a claim to be anticipated under 35 U.S.C. § 102(e), the reference must disclose each and every limitation in the claim. Applicants respectfully disagree with the rejection and traverse the rejection.

With regards to independent claim 17, Applicants respectfully submit that Ethridge fails to disclose, teach or suggest, at least, a source of synchronous clock signals coupled to each of the circuit server modules, the synchronous clock signals defining a plurality of synchronization intervals; the circuit server modules configured to perform synchronous time slot switching of synchronous data in a time-division multiplexing frame across the asynchronous switch.

Briefly, Ethridge discloses a technique for multiplexing high speed computed data with digitized voice signals onto a fiber optic cable for transfer to a local central office. (See Ethridge at Abstract). Ethridge discloses that data packets are multiplexed with other data packets and converted to corresponding optical signals for transfer via an optical fiber medium to an Ethernet

switch or other similar equipment, such as a LAN adapter located in the central office. (See Col. 3, lines 60-65). Ethridge discloses that PCM, DS1 and PC data packets can be efficiently multiplexed together and transported on a single line to the central office 20, where such signals are then separated from each other. (See Ethridge at Col. 10, lines 23-27). Ethridge discloses an optical channel shelf that separates the PCM voice signals from the computer data packets. (See Ethridge at Col. 12, lines 27-31 and 49-51). The PCM voice data separated from the data packets is coupled on a PCM bus to PCM channel equipment 78 or other PCM equipment adapted for transmitting such type of data. (See Ethridge at Col. 13, lines 17-41). With regard to data packets, the optical maintenance unit 62 temporarily stores such data packet and retransmits the data packet to the Ethernet Switch. (See Ethridge at Col. 15, lines 3-8). Therefore, Ethridge discloses multiplexing PCM data with data packets for transfer over an optical medium, separating PCM data from packet data, coupling the PCM data on to PCM equipment and transmitting packet data to an Ethernet Switch. Therefore, Applicants respectfully submit that Ethridge fails to disclose, teach or suggest, at least, synchronous time slot switching of synchronous data in a time-division multiplexing frame across the asynchronous switch.

Claims 18-19 are dependent from independent claim 17. For the same reasons as stated above for claim 17, Applicants respectfully submit that claims 18-19 are also in condition for allowance.

Claim Rejections Under 35 U.S.C. § 103

5. The Office Action states that claims 6-16 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Keenan in view of Luby et al, "Reliable Multicast Transport Building Block: Multirate Congestion Control", draft-ietf-rmt-bb-mrcc-00.txt, July 2000 ("Luby"). For the rejection under 35 U.S.C. § 103(a) to be proper, the references, alone or in combination, must teach or suggest all of the claim limitations. Applicants respectfully disagree with the rejection and traverse the rejection.

With regards to independent claim 10, Applicant respectfully submits that for the same reasons as stated above, Keenan fails to disclose, teach or suggest, at least, a mechanism for

asynchronously transmitting the subpackets through an asynchronous medium. Applicants respectfully submit that claim 10 is in condition for allowance.

With regards to independent 26, Applicant respectfully submits that Keenan and Luby, either alone or in combination, fail to disclose, teach or suggest, at least, a synchronization tag identifying the common synchronization interval during which the plurality of subpackets were constructed; data identifying the number of subpackets contained within the data structure; and context data associated with each one of the plurality of subpackets, the context data including a destination time slot identifier corresponding to the source time slot in a time-division multiplexing frame associated with a subpacket. Briefly, Luby discloses a multicast approach that allows multiple receivers to concurrently receive packets from a single sender at varying rates depending on individual bandwidth connections and network conditions. (See Luby at Abstract). Luby discloses that “[t]he sender partitions time into equal duration intervals called time slots. The time slot duration TSD determines the reaction time of receivers to changing network congestion conditions Associated with each time slot is the time slot index.” (See Luby at 6). Furthermore, Luby discloses that the sender places into each packet the time slot index and that all packets within the same time slot must have the same time slot index. (See Luby at 7). In contrast, Applicants’ claimed invention recites a source time slot in a time-division multiplexing frame where each signal stream (represented by the associated subpackets) has a unique time slot identifier. (See ‘053 Application at Paragraph 18). Therefore, Applicants respectfully submit that Luby fails to disclose, teach or suggest, at least, a source time slot in a time-division multiplexing frame associated with a subpacket.

Claims 6-9 are dependent, directly or indirectly, from independent claim 3. For the same reasons as stated above for claim 3, Applicants respectfully submit that claims 6-9 are also in condition for allowance. Claims 11-16 are dependent, directly or indirectly, from independent claim 10. For the same reasons as stated above for claim 10, Applicants respectfully submit that claims 11-16 are also in condition for allowance.

6. The Office Action states that claims 20-23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ethridge further in view of Keenan and Luby. For the rejection under 35

U.S.C. § 103(a) to be proper, the references, alone or in combination, must teach or suggest all of the claim limitations. Applicants respectfully disagree with the rejection and traverse the rejection.

Claims 20-23 are dependent, directly and indirectly, from claim 17. For the same reasons as stated above for claim 17, Applicants respectfully submit that claims 20-23 are in condition for allowance.

7. The Office Action states that claims 24-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ethridge in view of Keenan. For the rejection under 35 U.S.C. § 103(a) to be proper, the references, alone or in combination, must teach or suggest all of the claim limitations. Applicants respectfully disagree with the rejection and traverse the rejection.

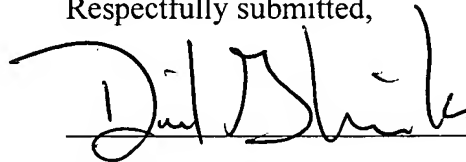
Claims 24-25 are dependent, directly and indirectly, from claim 17. For the same reasons as stated above for claim 17, Applicants respectfully submit that claims 24-25 are in condition for allowance.

CONCLUSION

Applicants' discussion of particular positions of the Examiner does not constitute a concession with respect to any positions that are not expressly contested by the Applicants. Applicants' emphasis of particular reasons why the claims are patentable does not imply that there are not other sufficient reasons why the claims are patentable nor does it imply the claims were not allowable in their unamended form.

In view of the foregoing remarks and the inability of the prior art, alone or in combination to anticipate, suggest, or make obvious the subject matter as a whole of the invention disclosed and claimed in this application, all claims are submitted to be in a condition for allowance, and notice thereof is respectfully requested. If the Examiner feels that a telephone conference would expedite the prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "David Miranda", is written over a horizontal line.

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